

### **REMARKS**

Claims 1-51 are pending in this application. Claims 17 and 33 have been rejected under 35 U.S.C. §102. Claims 1-16, 18-32, 34-44 and 46-51 have been rejected under 35 U.S.C. §103. Claims 33 and 45 have been objected to. Claims 1, 11, 17, 26, 28-30 and 42 have been amended. Claims 52-69 have been added. Claims 10, 16, 24, 33-41 and 45-51 have been cancelled. No new matter has been added. Reconsideration and allowance are respectfully requested.

### **Claim Objections**

The Examiner has objected to Claims 33 and 45 under 37 C.F.R. 1.75, stating that they are a substantial duplicate of Claims 17 and 26. Claims 33 and 45, and Claims 34-41 and 46-51, which depend either directly or indirectly from Claims 33 and 45, respectively, have been cancelled without prejudice.

### **Rejection Under 35 U.S.C. §102**

The Examiner has rejected Claims 17 and 33 under 35 U.S.C. §102(b) as being anticipated by Grudkowski, U.S. Patent #5,243,307. This rejection is respectfully traversed. However, in an effort to expedite prosecution of this application and pass the claims to allowance at an earliest possible date, Claim 17 has been amended. As stated above, Claim 33 has been cancelled.

Claim 17 has been amended by adding the features of Claim 24. Claim 24 has, accordingly, been cancelled. Now, Claim 17 recites, *inter alia*, that a selected frequency component of the acoustic wave is read from the transducer. This feature is not disclosed or implied in Grudkowski. Grudkowski is directed toward an acoustic charge transport device that varies the phase of a signal by controlling the velocity of a surface acoustic wave (SAW), thus allowing the relative phase between two signals to be maintained. The SAW velocity is controlled by illuminating the SAW substrate. Grudkowski does not disclose or imply reading a selected frequency component of the acoustic wave from the transducer.

Thus, Grudkowski does not disclose or even suggest all of the limitations recited in Applicant's Claim 17 as amended. Therefore, Applicant's Claim 17 is not anticipated by Grudkowski. Accordingly, withdrawal of the rejection of Claim 17 is respectfully requested.

**Rejection Under 35 U.S.C. §103(a)**

The Examiner has rejected Claims 1-16, 18-32, 34-44 and 46-51 under 35 U.S.C. §103(a) as being unpatentable over Grudkowski. This rejection is respectfully traversed. However, in an effort to expedite prosecution of this application and pass the claims to allowance at an earliest possible date, Claims 1, 11, 26, 28-30 and 42 have been amended.

Claims 1 and 42 have been amended by adding the features of Claim 10 while Claim 11 has been amended by adding the features of Claim 16. Claims 10 and 16 have, accordingly, been cancelled. Now, Claims 1, 11 and 42 recite, *inter alia*, reading a selected frequency component of the acoustic wave. As was the case with above with Claim 17, this feature is not disclosed or implied in Grudkowski.

In addition, Claims 26 and 28-30 have been amended such that they now recite a first light source and a second light source illuminating the medium. Support for these amendments may be found in the specification as originally filed at page 10, line 22 to page 11, line 5, and Figure 5. A first light source and a second light source illuminating the medium is not disclosed or implied in Grudkowski.

Grudkowski discloses only a single light source for illumination. The single light source controls SAW velocity in a substrate so that the phase of a corresponding signal may be controlled. It would not be obvious to use two light sources in Grudkowski because the addition of a second light source would offer no added benefits to phase control of the signal. In Grudkowski, anything that can be done with two light sources to control phase could just as easily be done with one light source. Accordingly, it would not be obvious to modify Grudkowski to include a second light source.

Accordingly, as amended, Claims 1, 11, 26 and 42, and the claims depending either directly or indirectly from these claims, are not obvious in light of Grudkowski. Withdrawal of the rejection of Claims 1-16, 26-32 and 42-44 is respectfully requested.

Likewise, Claims 18-23 and 25, which depend either directly or indirectly from Claim 17, are not obvious over Grudkowski for the reasons previously stated in connection with Claim 17. Withdrawal of the rejection of Claims 18-23 and 25 is respectfully requested.

**Added Claims**

Claims 52-69 have been added. Support for these new claims may be found, inter alia, at page 10, line 22 to page 11, line 5, and Figure 5. No new matter has been added.

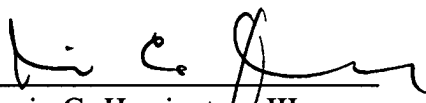
In a manner similar to Claim 26, Claim 52 recites illuminating a first portion of a medium with a first illumination and illuminating a second portion of the medium with a second illumination. Similarly, Claim 62 recites a first light source illuminating a first portion of the medium and a second light source illuminating a second portion of the medium. These features are not disclosed or implied in Grudkowski and the discussion above in connection with Claim 26 is equally applicable to Claims 52 and 62. Thus, Claims 52 and 62, and Claims 53-61, which depend either directly or indirectly from Claim 52, and Claims 63-69, which depend either directly or indirectly from Claim 62, are allowable over Grudkowski.

In view of the foregoing, favorable reconsideration of the application is respectfully requested. It is submitted that the claims of record are in condition for allowance.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to Deposit Account No. 50-0872 and, in particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 C.F.R. 1.136 (A) requesting an extension of time of the number of months necessary to make this response timely filed. The petition fee due in connection therewith may be charged to deposit account No. 50-0872.

Respectfully submitted,

November 29, 2001

  
Irvin C. Harrington, III  
Reg. No. 44,740  
FOLEY & LARDNER  
2029 Century Park East, 35<sup>th</sup> Floor  
Los Angeles, CA 90067-3021  
(310) 277-2223



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

RECEIVED  
PATENT  
JAN - 7 2002  
TC 2800 MAIL ROOM

Applicant: John Hong	)	Examiner: Karen Addison
	)	
Serial No.: 09/672,682	)	Group Art Unit: 2834
	)	
Filed: September 28, 2000	)	Our Ref: 071815/0490
	)	
For: METHOD AND APPARATUS FOR	)	
MODIFYING ACOUSTIC WAVE	)	
CHARACTERISTICS	)	

**MARKED-UP COPY OF AMENDMENT AND REQUEST FOR  
RECONSIDERATION UNDER 37 C.F.R. §1.111**

Commissioner of Patents  
Washington, D.C., 20231

Sir:

In response to the Office Action dated August 29, 2001, please amend the application as follows and enter the following remarks into the prosecution history.

**IN THE CLAIMS**

Please cancel claims 10, 16, 24, 33-41 and 45-51.

Please amend the following claims:

1. (Amended) A method for modifying the characteristics of an acoustic wave, comprising the steps of:

providing a medium for acoustic wave propagation;

generating an acoustic wave;

propagating the acoustic wave using the medium; ~~and~~

illuminating the medium during the propagation of the acoustic wave; and

reading a selected frequency component of the acoustic wave.

11. (Amended) A method for modifying the characteristics of an acoustic wave, comprising the steps of:

generating an acoustic wave in a medium; ~~and~~

varying a velocity of the acoustic wave; ~~and~~

reading a selected frequency component of the acoustic wave.

17. (Amended) An apparatus for varying the characteristics of an acoustic wave, comprising:

a medium for acoustic wave propagation;

a transducer formed on the medium; and

a light source illuminating the medium;

wherein a selected frequency component of the acoustic wave is read from the transducer.

26. (Amended) A method for making an acoustic wave device, comprising the steps of:

providing a medium for acoustic wave propagation;

forming a transducer on the medium; ~~and~~

providing a first light source for illuminating the medium; ~~and~~

providing a second light source for illuminating the medium.

28. (Amended) The method of Claim 26, wherein the first light source ~~or the second light source~~ is a laser diode.

29. (Amended) The method of Claim 26, wherein the first light source ~~or the second light source~~ is a light-emitting diode.

30. (Amended) The method of Claim 26, further comprising the step of providing means for varying an intensity of a light generated by the ~~light emitting diode~~ first light source ~~and the second light source.~~

42. (Amended) A method for modifying the characteristics of an acoustic wave, comprising the steps of:

providing a medium for acoustic wave propagation;

generating an acoustic wave;

propagating the acoustic wave using the medium; ~~and~~

inducing a charge grating in the medium during the propagation of the acoustic wave-; and

reading a selected frequency component of the acoustic wave.